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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,656	11/26/2003	Jose M. Sosa	API-1017-US(COS-919)	8871
25264	7590	12/08/2004	EXAMINER	
FINA TECHNOLOGY INC PO BOX 674412 HOUSTON, TX 77267-4412			ASINOVSKY, OLGA	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,656

Applicant(s)

SOSA ET AL.

Examiner

Olga Asinovsky

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1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/26/2003.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krupinski et al U.S. Patent 6,433,092 or Krupinski et al U.S. Patent 6,166,099, or Krupinski et al U.S. Patent 6,274,641, or Krupinski et al U.S. Patent 6,420,444 (cited by applicants), or Krupinski et al U.S. Patent 6,608,141.

All Patents to Krupinski disclose a process for producing a vinylaromatic polymer. A vinylaromatic monomer is polymerized=grafted onto a rubbery polymer in the presence of a tetrafunctional initiator. A rubbery polymer can be a conjugated diolefin polymer. A tetrafunctional initiator in each Patent is applicants' claimed tetrafunctional initiator. The vinylaromatic polymer is prepared by solution or bulk polymerization process such that the initiator is present from 0.01 to 01 wt.%, the vinyl aromatic monomer is present in the range from 60 to 100 wt%, the temperature in the first reaction zone is 100 to 130 C and from 130 to 160 C in the subsequent reaction zone. The residence time and the reaction temperature are controlled for producing the desired characteristic of the polystyrene product. The recovering product is high impact polystyrene.

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See Patent 6,433,092, column 4, lines 31, 37-38, column 5, lines 31-60 and column 8, line.36.

Patent 6,166,099, column 2, lines 57, 63-66, column 3, lines 58-66 and column 5, lines 27-66.

Patent 6,274,641, column 2, lines 59, 65-66, column 4, lines 37-38, column 5, lines 35-66 and column 6, line 3.

Patent 6,420,444, column 2, lines 59-66, column 3, lines 59-65, column 4, lines 63-67 and column 5, lines 10-62.

Patent 6,608,141, column 4, lines 57-66, column 5, lines 34-66, column 7, lines 56-60, column 8, lines 40-60, column 9, lines 21-30.

The difference between the present claims and each cited Patent is the requirement in the present claims that a resulting copolymerized product has a ratio of % gel to % rubber (G/R) that increases as swell index increases. It would have been obvious to one of ordinary skill in the art to consider that the ratio of % gel to % rubber can be obtained in each Patent to Krupinski because each reference discloses a process for making a HIPS wherein the process conditions are controlled by the residence time and the reaction temperature, and the amount of the ingredients for producing the desired high impact polystyrene.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art has been considered. Any inquiry concerning this communication or earlier communications from the examiner should be

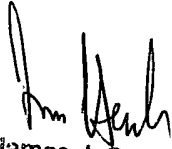
directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.A.
December 01, 2004

Olga Asinovsky
Examiner
Art Unit 1711


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700